

West Virginia Department of Environmental Protection
Division of Air Quality

Joe Manchin III
Governor

Stephanie R. Timmermeyer
Cabinet Secretary

General Permit Registration



Pursuant to
Title V
of the Clean Air Act

Columbia Gas Transmission Corporation
Glady Compressor Station
R30-NGGP-2007-08300017
Effective Date: September 11, 2007

John A. Benedict
Director

Date Signed: August 27, 2007

Registration Number: **R30-NGGP-2007-08300017**
Permittee: **Columbia Gas Transmission Corporation**
Facility Name: **Gladly Compressor Station**
Mailing Address: 1700 MacCorkle Avenue, S.E.
Charleston, WV 25314
Permit Contact: Kasey Gabbard (304) 357-2079

This Registration is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this Registration and of Permit Number R30-NGGP-2007.

Facility Location:	Gladly, Randolph County, West Virginia
Mailing Address:	Route 1, Box 117, Gladly, WV 26268
Telephone Number:	(304) 635-2155
Type of Business Entity:	Corporation
Facility ID #:	083-00017
Facility Description:	Natural Gas Transmission Facility
SIC Codes:	4922
UTM Coordinates:	612.52 km Easting • 4,293.19 km Northing • Zone 17

Permit Writer: U.K.Bachhawat

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit Registration does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Natural Gas General Permit (R30-NGGP-2007) Sections
Facilitywide						Section 2.0, Section 3.1.1 to 3.1.8, 3.1.14, 3.1.15, 3.2 to 3.7
BLR1*	BL1	TEG Dehydrator Reboiler; NATCO Model SB24/20-14	1990	1.4 MMBtu/hr	N/A	Section 4.0.
BLR2*	BL2	TEG Dehydrator Reboiler; NATCO Model SB24/20-14	1990	1.4 MMBtu/hr	N/A	Section 4.0.
BLR4*	BL4	Glycol Reclaimer/Reboiler; Flamco SB12-8	1999	0.15 MMBtu/hr	N/A	Section 4.0
BLR5*	BL5	Heating System Boiler; Peerless 211A-10-WS-1	2001	1.5 MMBtu/hr	N/A	Section 4.0
HTR3*	H3	Indirect-Fired Line Heater; NATCO	1998	15 MMBtu/hr	N/A	Sections 3.1.11, 5.0 (except for 5.1.2), R13-2218C
HTR4*	H4	Indirect-Fired Line Heater; NATCO	1998	15 MMBtu/hr	N/A	Sections 3.1.11, 5.0 (except for 5.1.2), R13-2218C
16801*	E01	Reciprocating Engine/Integral Compressor; Ingersoll-Rand 48KVS; 4-cycle, lean burn	1965	1,320 HP	N/A	None
16802*	E02	Reciprocating Engine/Integral Compressor; Ingersoll-Rand 48KVS; 4-cycle, lean burn	1965	1,320 HP	N/A	None
16803*	E03	Reciprocating Engine/Integral Compressor; Ingersoll-Rand 48KVS; 4-cycle, lean burn	1965	1,320 HP	N/A	None

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Natural Gas General Permit (R30-NGGP-2007) Sections
168G1*	G1	Reciprocating Engine/Generator; Waukesha F2895GL; 4-cycle, rich burn	1992	336 HP	N/A	None
168G3*	G3	Reciprocating Engine/Generator; Waukesha VGF-H24GL; 4-cycle, lean burn	1998	608 HP	N/A	Sections 6.2.2, 6.2.3, 6.3.1, 6.4.1. R13-2218C
TEGDEHY1-1* TEGDEHY1-2*	FL3	TEG Dehydrator; BS&B - packing type; NATCO SHV-6 flare	2000 2002	312 MMscf/day	Flare (FL3)	Sections 3.1.12, 3.1.13, 12.1.1, 12.1.2 to 12.1.7, 12.2, 12.3, 12.4.1 to 12.4.7, 12.5. R13-2218C
A21	A21	Horizontal Fixed Roof Tank Pipeline/ Storage Field Liquids (Maximum vapor pressure less than 15.0 kPa)	1990	30,000 gallons	N/A	Section 11.0 40 C.F.R §60.110b(b) and 40 C.F.R §60.116b
A25	A25	Horizontal Fixed Roof Tank Pipeline/ Storage Field Liquids (Maximum vapor pressure less than 15.0 kPa)	2002	30,000 gallons	N/A	Section 11.0 40 C.F.R §60.110b(b) and 40 C.F.R §60.116b

* Equipment burns pipeline quality natural gas only.

45CSR13/14, Consent Order specific and Other Requirements not included in Title V General Permit:

1. R13-2218C.



Division of Air Quality
7012 MacCorkle Avenue, South East
Charleston, WV 25304-2943
Telephone Number: (304) 926-3727
Fax Number: (304) 926-3739

West Virginia Department of Environmental Protection

Bob Wise
Governor

Stephanie R. Timmermeyer
Acting Cabinet Secretary

PERMIT TO MODIFY A NATURAL GAS COMPRESSOR STATION

IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL LAW (W. Va. Code §§22-5-1 et seq.), AND REGULATIONS PROMULGATED THEREUNDER, THE FOLLOWING PERMITTEE IS AUTHORIZED TO CONSTRUCT, SUBJECT TO THE TERMS AND CONDITIONS OF THIS PERMIT, THE SOURCE DESCRIBED BELOW.

This permit will supersede and replace Permit R13-2218B.

Name of Permittee: Columbia Gas Transmission Corporation

Name of Facility: Gladly Compressor Station

Permit No.: R13-2218C

Plant ID No.: 083-00017

Effective Date of Permit: March 11, 2003

Permit Writer: Toby Scholl

Facility Mailing Address: P.O. Box 1273
Charleston, WV 25325-1273

County: Randolph

Nearest City or Town: Gladly

UTM Coordinates: Easting: 612.52 km Northing: 4,293.19 km Zone: 17

Directions to Exact Location: Traveling US Route 33 East, turn right on secondary route 27 at Alpena. Proceed approximately 10 miles to Gladly, turn left on Route 22, travel 1 mile to station.

Type of Facility or Modification: Incorporation of fuel usage limitations for G3, H3 and H4, which were inadvertently dropped from subsequent amendments to the original version of permit no. R13-2218. Also to correct equipment descriptions for G3, H3 and H4.

THE SOURCE IS SUBJECT TO 45CSR30. THE PERMITTED FACILITY'S TITLE V (45CSR30) PERMIT R30-08300017-1996, ISSUED ON 12/01/97, MUST BE REVISED BEFORE COMMENCING OPERATION OF THE ACTIVITY AUTHORIZED BY THIS PERMIT.



West Virginia Department
of Environmental Protection

"Promoting a healthy environment."

IN ACCORDANCE WITH THE PERMIT APPLICATION AND ITS AMENDMENTS, THIS PERMIT IS LIMITED AS FOLLOWS:

A. SPECIFIC REQUIREMENTS

1. Emissions to the atmosphere shall not exceed the emission rate limits from the emission points listed in the following table. In accordance with the information filed in permit applications R13-2218A and R13-2218B, all amendments attached thereto, and all subsequent revisions submitted, the following equipment shall be modified, and the following control equipment shall be installed, maintained, and operated to achieve, at a minimum, a 95% reduction of hazardous air pollutants (HAP):

Emission Point ID	Equipment Description [Control Device]	Emission Rates		
		Pollutant	PPH	TPY
FL3	Triethylene Glycol Contact Tower (312 Mmscf/day) (TEGDEHY1-1/TEGDEHY1-2) [NATCO Dehydrator Flare (5.74 MMBTU/hr) (FL3)]	NO _x	0.39	1.71
		CO	2.13	9.30
		SO ₂	0.33	0.02
		PM ₁₀	0.02	0.05
		VOC	1.91	8.33
		Benzene	0.48	2.09
		Toluene	0.51	2.22
		Ethylbenzene	0.16	0.68
		Xylene	0.23	1.01
		Hexane	0.02	0.08
G3	Waukesha VGF-H24GL, 608 HP Engine (Generator)	NO _x	3.48	15.26
		CO	2.34	10.27
		SO ₂	0.34	1.50
		PM ₁₀	0.17	0.76
		VOC	1.00	4.40
H3	Natco 15 MMBTU/hr Line Heater	NO _x	2.10	9.20
		CO	0.53	2.30
		SO ₂	0.01	0.04
		PM ₁₀	0.21	0.90
		VOC	0.04	0.18
H4	Natco 15 MMBTU/hr Line Heater	NO _x	2.10	9.20
		CO	0.53	2.30
		SO ₂	0.01	0.04
		PM ₁₀	0.21	0.90
		VOC	0.04	0.18

2. The maximum quantity of wet gas processed through the Triethylene Glycol Contact Tower (TEGDEHY1-1/TEGDEHY1-2) shall not exceed 13 MMscf/hr, 312 MMscf/day, and 113,880 MMscf/yr on a rolling twelve (12) month total.

R13-2218C
Columbia Gas Transmission Corporation
Gladly Compressor Station

3. The permittee shall operate and maintain a control device to control and reduce emissions of Hazardous Air Pollutants below the applicability threshold specified in 40CFR63 Subpart HHH. The flare shall be designed and operated as follows:
 - a. The TEG dehydrator shall be equipped with a flare to control organic compound emissions. The flare shall be fired with natural gas and shall be operated with 95% or greater control efficiency and in accordance with 40CFR60.18 "General Control Device Requirements" paragraphs (c) through (f).
 - b. The flare controlling the TEG dehydrator emissions shall be designed and operated in a manner that will ensure no visible emissions, as determined by 40CFR60.18(f), except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
 - c. The flare and pilot flame shall be operated at all times when emissions may be vented to it, as determined by methods specified in 40CFR60.18(f).
 - d. The flare shall be used only when the net heating value of the gas being combusted is 200 BTU/scf or greater. The net heating value of the gas being combusted shall be determined by the methods specified in 40CFR60.18(f).
 - e. The flare shall be designed and operated with an exit velocity that satisfies the requirements of 40CFR60.18(f).
4. Facility-wide emissions to the atmosphere of Benzene, Toluene, Ethylbenzene, Xylene, and Hexane shall not exceed, on a per HAP basis, ten (10) tons per year or, on a total HAP basis, twenty-five (25) tons per year.
5. The quantity of natural gas that is consumed in 608-HP natural gas compressor engine (G3) shall not exceed 5,997 cubic feet per hour or 52.53×10^6 cubic feet per year.
6. The quantity of natural gas that is consumed in 15 MM Btu/hr natural gas fired line heater (H3) shall not exceed 15,000 cubic feet per hour or 131.40×10^6 cubic feet per year.
7. The quantity of natural gas that is consumed in 15 MM Btu/hr natural gas fired line heater (H4) shall not exceed 15,000 cubic feet per hour or 131.40×10^6 cubic feet per year.

B. OTHER REQUIREMENTS

1. Tests that are required by the Director to determine compliance with the emission limitations for G3, H3, and H4 of this permit shall be conducted in

R13-2218C
Columbia Gas Transmission Corporation
Gladly Compressor Station

accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

- a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A.
 - b. Tests to determine compliance with SO₂ emission limits shall be conducted in accordance with Method 6, 6A, 6B, or 6C as set forth in 40 CFR 60, Appendix A.
 - c. Tests to determine compliance with CO emission limits shall be conducted in accordance with Method 10, 10A, or 10B as set forth in 40 CFR 60, Appendix A.
 - d. Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7, 7A, 7B, 7C, 7D, or 7E as set forth in 40 CFR 60, Appendix A.
 - e. Tests to determine compliance with VOC emission limits shall be conducted in accordance with Method 25 or 25A as set forth in 40 CFR 60, Appendix A.
 - f. Tests to determine compliance with Opacity of emissions shall be conducted in accordance with Method 9 as set forth in 40 CFR 60, Appendix A.
2. With regard to any testing required by the Director, the permittee shall submit to the Director of Air Quality a test protocol detailing the proposed test methods, the date, and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information. The test protocol must be received by the Director no less than thirty (30) days prior to the date the testing is to take place. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place.
 3. Compliance with the emission limits for Triethylene Glycol Contact Tower (TEGDEHY1-1/TEGDEHY1-2) will be demonstrated using GRI-GLYCal Version 3.0 and the design throughput of the dehydration unit (312 MMscf/day or 13 MMscf/hr).
 4. The permittee shall record the following information for the flare each month during TEG Dehydration unit operation.
 - a) Maintain records of the presence of a pilot flame, and

R13-2218C
Columbia Gas Transmission Corporation
Gladys Compressor Station

- b) The amount of assist gas (natural gas) added to the uncondensed vapor/hydrocarbon and burned in the flare shall be metered.
5. Compliance with the design and operating conditions set forth in SPECIFIC REQUIREMENT A.3 shall be determined by maintaining design records/calculations indicating the minimum assist gas flare flow rate and the maximum allowable flare exit gas velocity.
6. All records required by this permit shall be kept and maintained onsite for a period of not less than five (5) years from the date of the observation. Certified copies of these records shall be made available, upon request, to the Director of the Division of Air Quality or his or her duly authorized representative.
7. The permittee shall comply with all applicable provisions of 45CSR2 provided that the permittee shall comply with any more stringent requirements as may be set forth under SPECIFIC REQUIREMENTS of this permit. The pertinent sections of 45CSR2 applicable to this facility include, but are not limited to, the following:

§45-2-3.1

No person shall cause, suffer, allow or permit emission of smoke into the open air from any fuel burning unit which is darker in shade or appearance than ten (10) percent opacity.

§45-2-3.2

Compliance with the visible emission requirements of §45-2-3.1 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of §45-2-3.1.

§45-2-3.4

The Director may approve an alternative visible emission standard to that required under §45-2-3.1, not to exceed twenty (20) percent opacity, upon the filing of a written petition by the owner or operator, which petition shall include a demonstration satisfactory to the Director.

8. The permittee shall comply with all applicable provisions of 45CSR6 provided that the permittee shall comply with any more stringent requirements as may be set forth under SPECIFIC REQUIREMENTS of this permit. The pertinent sections of 45CSR6 applicable to this facility include, but are not limited to, the following:

§45-6-4.1

No person shall cause, suffer, allow or permit particulate matter to be discharged

R13-2218C
Columbia Gas Transmission Corporation
Gladly Compressor Station

from any incinerator into the open air in excess of the quantity determined by use of the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is as indicated in Table I below:

Incinerator Capacity	Factor F
A. Less than 15,000 lbs/hr	5.43
B. 15,000 lbs/hr or greater	2.72

§45-6-4.3

Emission of Visible Particulate Matter – No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater.

§45-6-4.4

The provisions of subsection 4.3 shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up, or six (6) minutes in any sixty (60) -minute period for stoking operations.

9. The permittee shall comply with all applicable provisions of 45CSR10 provided that the permittee shall comply with any more stringent requirements as may be set forth under SPECIFIC REQUIREMENTS of this permit. The pertinent sections of 45CSR10 applicable to this facility include, but are not limited to, the following:

§45-10-4.1

No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from any existing source operations.

§45-10-5.1

No person shall cause, suffer, allow or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas.

10. The pertinent sections of 45CSR13 applicable to this facility include, but are not limited to, the following:

§45-13-6.1

At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Director thereafter, appropriate tests consisting of visual determinations

R13-2218C
Columbia Gas Transmission Corporation
Gladly Compressor Station

or conventional in-stack measurements or such other tests the Director may specify shall be conducted to determine compliance.

§45-13-10.2

The Director may suspend or revoke a permit if, after six (6) months from the date of issuance, the holder of the permit cannot provide the Director, at the Director's request, with written proof of a good faith effort that construction, modification, or relocation, if applicable, has commenced. Such proof shall be provided not later than thirty (30) days after the Director's request. If construction or modification of a stationary source is discontinued for a period of eighteen (18) months or longer, the Director may suspend or revoke the permit.

§45-13-10.3

The Director may suspend or revoke a permit if the plans and specifications upon which the approval was based or the conditions established in the permit are not adhered to. Upon notice of the Director's intent to suspend, modify or revoke a permit, the permit holder may request a conference with the Director in accordance with the provisions of W.Va Code § 22-5-5 to show cause why the permit should not be suspended, modified or revoked.

C. GENERAL REQUIREMENTS

1. In accordance with 45CSR30 - "Operating Permit Program", the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first filing a Certified Emissions Statement (CES) and paying the appropriate fee. Such Certified Emissions Statement (CES) shall be filed and the appropriate fee paid annually. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Director or his/her duly authorized representative.
2. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.
3. The permitted facility shall be constructed and operated in accordance with information filed in Permit Applications R13-2218, R13-2218A, and R13-2218B and any amendments thereto. The Director may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.
4. At such reasonable time(s) as the Director may designate, the permittee shall conduct or have conducted test(s) to determine compliance with the emission

R13-2218C
Columbia Gas Transmission Corporation
Gladly Compressor Station


limitations established in the permit application and/or applicable regulations. Test(s) shall be conducted in such a manner as the Director may specify or approve and shall be filed in a manner acceptable to the Director. The Director, or his/her duly authorized representative, may at his option witness or conduct such test. Should the Director exercise his option to conduct such test(s), the permittee shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. For any tests to be conducted by the permittee, a test protocol shall be submitted to the DAQ by the permittee at least thirty (30) days prior to the test and shall be approved by the Director. The Director shall be notified at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted.

5. In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations, either in whole or in part, authorized by this permit, the permittee shall notify the Director, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.
6. The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.
7. The permittee shall notify the Director, in writing, within fifteen (15) calendar days of the commencement of the construction, modification, or relocation activities authorized under this permit.
8. The permittee shall notify the Director, in writing, at least fifteen (15) calendar days prior to actual startup of the operations authorized under this permit.
9. This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13.
10. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7.

R13-2218C
Columbia Gas Transmission Corporation
Gladys Compressor Station

11. At such time(s) as the Director may designate, the permittee herein shall prepare and submit an emission inventory for the previous calendar year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Director may, based upon the type and quantity of the pollutants emitted, establish a submittal frequency other than on an annual basis.

ISSUED BY:


JOHN A. BENEDICT, DEPUTY DIRECTOR
WV DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

DATE SIGNED:

3-11-03

R13-2218C
Columbia Gas Transmission Corporation
Gladly Compressor Station

Page 9 of 9